IN THE CLAIMS:

Please amend the claims as follows:

1. (Original) An integrated circuit chip comprising:

a segmented data line; and

data propagators positioned between segments of said segmented data line,

wherein said data propagators are adapted to simultaneously propagate different data portions along segments of said segmented data line, such that a first segment of said segmented data line carries a first data portion and a second segment of said segmented data line simultaneously carries a second data portion.

2. (Original) The integrated circuit chip in claim 1, further comprising a collector connected to said segmented data line, wherein said collector is adapted to combined said different data portions into a single data transmission.

3. (Original) The integrated circuit chip in claim 2, further comprising an initiator adapted to break up said single data transmission into said different data portions.

4. (Original) The integrated circuit chip in claim 2, wherein said different data portions comprise self-timed data portions.

5. (Original) The integrated circuit chip in claim 1, wherein said segmented data line comprises a single data communication line between a single data source and a single data target.

6. (Original) The integrated circuit chip in claim 1, wherein said segmented data line comprises a data communication network between at least one data source and multiple data targets.

7. (Original) The integrated circuit chip in claim 1, wherein said data propagators are adapted to return a data receipt acknowledgment to a previous data propagator as each of said data propagators forward data to the next data propagator.

8. (Original) An integrated circuit chip comprising:

a data source;

a data target;

a segmented data line between said data source and said data target;

a data transmitter connected to said data source and to a first segment of said segmented data line, wherein said data transmitter is adapted to prepared data from said data source for transmission along said segmented data line;

at least one data propagator connected to said first segment of said segmented data line and to a second segment of said segmented data line, wherein said data propagator is adapted to send a data receipt acknowledgement to said data transmitter and to propagate said data along said second segment of said segmented data line, such that said first segment of said segmented data line carries a first data portion and said second segment of said segmented data line simultaneously carries a second data portion; and

a data receiver connected to said second segment of said segmented data line and to said data target, wherein said data receiver is adapted to prepare data from said second segment of said segmented data for receipt by said data target.

9. (Original) The integrated circuit chip in claim 8, wherein said data transmitter, said data propagator, and said data receiver are synchronized with each other.

10. (Original) The integrated circuit chip in claim 8, wherein said data transmitter is adapted to break up a data segment received from said data source into a plurality of smaller self-timed data portions.

11. (Original) The integrated circuit chip in claim 10, wherein said data transmitter and said data propagator are adapted to transmit one of said self-timed data portions along each of said segments of said segmented data line at a time, such that each of said segments of said segmented data line simultaneously transmits a different self-timed data portion.

12. (Original) The integrated circuit chip in claim 10, wherein said data receiver it is adapted to reassemble said self-timed data portions back into said data segment.

13. (Original) The integrated circuit chip in claim 8, wherein said data source and said data target are located on a single integrated circuit chip.

14. (Original) An integrated circuit chip comprising:

a data source;

a data target;

a segmented data line between said data source and said data target;

a data transmitter connected to said data source and to a first segment of said segmented data line;

at least one data propagator connected to said first segment of said segmented data line and to a second segment of said segmented data line, wherein said data propagator is adapted to send a data receipt acknowledgement to said data transmitter and to propagate said data along said second segments of said segmented data line, such that said first segment of said segmented data line carries a first data portion and said second segment of said segmented data line simultaneously carries a second data portion; and

a data receiver connected to said second segment of said segmented data line and to said data target.

15. (Original) The integrated circuit chip in claim 14, wherein said data transmitter, said data propagator, and said data receiver are synchronized with each other.

16. (Original) The integrated circuit chip in claim 14, wherein said data transmitter is adapted to break up a data segment received from said data source into a plurality of smaller self-timed data portions.

17. (Original) The integrated circuit chip in claim 16, wherein said data transmitter and said data propagator are adapted to transmit one of said self-timed data portions along each of said segments of said segmented data line at a time, such that each of said segments of said segmented data line simultaneously transmits a different self-timed data portion.

18. (Original) The integrated circuit chip in claim 16, wherein said data receiver it is adapted to reassemble said self-timed data portions back into said data segment.

19. (Original) The integrated circuit chip in claim 14, wherein said data source and said data target are located on a single integrated circuit chip.

20. (Original) A method of transmitting data within an integrated circuit chip, said method comprising:

propagating a first data portion along a first segment of a segmented data line; and

propagating said first data portion along a second segment of said segmented data line and simultaneously propagating a second data portion along said first segment of said segmented data line.

21. (Original) The method in claim 20, further comprising breaking a single data transmission into different data portions, wherein said different data portions include said first data portion and said second data portion.

22. (Original) The method in claim 21, further comprising reassembling said different data portions into said single data transmission after all of said different data portions have been individually transmitted along all portions of said segmented data line.

23. (Original) The method in claim 20, wherein data propagators are positioned between each segment of said segmented data line, wherein said method further comprises returning a data receipt acknowledgment to a previous data propagator as each of said data propagators forward data to the next data propagator.

24. (Original) The method in claim 20, wherein said method simultaneously propagates different data portions along segments of said segmented data line, such that said second segment of said segmented data line carries said first data portion and said first segment of said segmented data line simultaneously carries said second data portion.

25. (Original) A method of transmitting data on an integrated circuit chip, said method comprising:

breaking a single data transmission into different data portions, wherein said different data portions include a first data portion and a second data portion;

propagating said first data portion along a first segment of a segmented data line; and

propagating said first data portion along a second segment of said segmented data line and simultaneously propagating said second data portion along said first segment of said segmented data line; and

reassembling said different data portions back into said single data transmission after all of said different data portions have been individually transmitted along all portions of said segmented data line.

26. (Original) The method in claim 25, wherein data propagators are positioned between each segments of said segmented data line, wherein said method further comprises returning a data receipt acknowledgment to a previous data propagator as each of said data propagators forward data to the next data propagator.

27. (Original) The method in claim 25, wherein said method simultaneously propagates different data portions along segments of said segmented data line, such that said second segment of said segmented data line carries said first data portion and said first segment of said segmented data line simultaneously carries said second data portion.